

Valdez, Heather

From: Sally McLeod <Sally.Mcleod@smmpogo.com>
Sent: Wednesday, July 10, 2013 6:34 PM
To: Valdez, Heather
Cc: Chris Kennedy
Subject: Pogo - CISWI Rule

Categories: Pogo FOIA

Hi Heather:

We are writing to follow-up on your email below and to update you regarding the stack testing for the incinerator. Thank you for your time to discuss the petition and the stack testing plan. We understand that Pogo may have the only small, remote incinerator in Alaska that is considered a “new” commercial industrial solid waste incinerator under the CISWI rule. We appreciate any guidance you can provide. The following summarizes the stack testing and responds to the issues you raised in your email and on the call regarding the petition.

Summary of Stack Testing

Consistent with the testing protocols and EPA’s methods, Pogo performed stack testing on the incinerator on June 26 through June 28. AECOM ran three groups of tests on each day and varied the order of the groups on successive days to obtain representative samples of the emissions from the unit.

During the testing, Pogo recorded the following operating parameters:

- weight of each waste-charge loaded
- time between loads
- primary chamber temperature (at 5 min intervals)
- start and end times of primary chamber total burn cycle
- secondary chamber temperature (at 5 min intervals)
- start and end times of secondary chamber total burn cycle
- record the time when each waste-charge is loaded into the incinerator

Pogo did not have any issues recording these operating parameters. Based on the temperature recordings, the primary combustion chamber temperature ranged from 1,200° F to 1,400° F. We understand the manufacturer has available a monitoring device that will continuously record the primary chamber and secondary chamber temperature. Depending on the results of the stack testing, Pogo could consider purchasing the monitoring device if EPA believes that continuous recording of the temperature is necessary.

During the stack testing, AECOM also measured the exhaust gas flow rate. AECOM measured the exhaust gas flow rate at 5-minute intervals. AECOM did not indicate any issues with measuring exhaust gas flow rate.

In your email, you raised specific issues with respect to waste composition and the incinerator fuel.

During the stack testing, Pogo did not vary the mix of waste. Pogo ran a constant mix of materials for all nine runs representative of the types of solid waste generated at the site. As discussed during the call, the majority of the materials that Pogo burns in the incinerator are municipal solid wastes as defined under the CISWI Rule. Pogo generates approximately 85% MSW, 10% non-hazardous industrial waste (rags, absorbs) and 5% sewage treatment sludge. These wastes are burned in the incinerator unit.

Pogo has a robust waste characterization program. Pogo identifies and segregates its hazardous wastes, solid wastes and Bevill exempted wastes. Hazardous wastes are not combusted in the incineration unit. During the operating life of the facility, Pogo will continue to maintain its waste characterization plan.

Pogo does not fire the incinerator with waste oil and does not plan on firing the incinerator with waste oil. Only propane is used to fire the incinerator and Pogo anticipates only using propane in the future. A metering system was not installed on the propane tank. If necessary, Pogo can install a meter to measure the propane used.

We anticipate receiving the stack test results in early August. Consistent with the CISWI rule and the general NSPS regulations, we will forward these results to EPA.

Applicable Dates

Based on our understanding of the final CISWI rule, we believe the following dates apply:

- Effective Date of CISWI Rule - **August 7, 2013** [40 CFR § 60.2005]
- "Initial Startup" Date - **August 7, 2013** (Because Pogo's incinerator is already operating, the "initial startup" date should be the same as the effective date of the rule) [40 CFR § 60.2005]
- Initial Performance Test - **October 6, 2013** if the unit is running at full charge rate or **February 3, 2014** if not running at full charge rate and the unit has been operating since the effective date of rule. [40 CFR § 60.2140]
- Petition for Operating Limits – **August 7, 2013** [40 CFR §§ 60.2115]. The petition, if applicable, must be submitted at least 60 days before the initial performance test.
- Compliance with Operating Limits - **December 5** (60 days following the initial performance test) if the unit is running at full charge rate or **February 3, 2014** if not running at full charge rate and unit has been operated since the effective date of the rule. [40 CFR § 60.2110(b)].

We would appreciate EPA's confirmation of these dates or letting us know if EPA believes a different date is appropriate.

Revised Petition

Pogo is working on a revised petition to incorporate EPA's initial comments and the information gathered during the stack testing. As noted above, it appears that the revised petition must be submitted by August 7—the effective date of the CISWI rule. Pogo believes it may be more appropriate to submit the revised petition after the stack test results are received and Pogo and EPA have had an opportunity to review. As you noted in your email, the testing may provide useful information and data on emissions compliance.

We anticipate receiving the stack testing results in early August. If the revised petition is due August 7, 2013, the timing may not work. EPA's general provisions covering performance tests in the NSPS rules allow a party to request an extension of a performance test deadline. See, e.g., 40 CFR § 60.8(a) and (b). If EPA believes that Pogo would benefit from incorporating the results of the stack testing into the revised petition and provide EPA sufficient time to review, a short extension of time for submittal of the petition and the initial performance test may be warranted. Please let us know if you believe a short extension is warranted and the appropriate process for Pogo to request the extension.

In addition, 40 CFR § 60.2195 appears to require that a source submit the following information prior to initial start-up:

- (a) Type(s) of waste to be burned;
- (b) The maximum design waste burning capacity;
- (c) The anticipated maximum charge rate;
- (d) If applicable, the petition for site-specific operating limits under § 60.2115; and
- (e) The anticipated date of start-up.

Pogo has submitted this information in its initial notification letter to EPA, the initial petition submitted under 40 CFR § 60.2115 and the stack testing plan. Please let us know if EPA requires Pogo to re-submit this information in a different format.

After you have had a chance to review, we would appreciate scheduling a short call to discuss. We look forward to continuing to work with EPA on these issues.

Again, thanks for your assistance.

Sally S. McLeod, CEM, REM
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From: Valdez, Heather [<mailto:Valdez.Heather@epa.gov>]
Sent: Monday, June 17, 2013 3:24 PM
To: Sally McLeod
Cc: Hedgpeth, Zach
Subject: Review of the Incinerator Operating Limits Petition for Pogo

Hi Sally, Below I have a summary of the comments EPA had regarding your petition, that we spoke about by phone last week. As we discussed the petition request is not approvable in the current form. EPA understands that Pogo will plan to proceed with testing in the coming weeks even though the test will not count as the required initial performance test, because of the petition not being approved. While this is not an official response to the petition request, and this does not imply that if these changes are made the petition and test would be considered acceptable, EPA does offer these points to consider as you go forward with testing the incineration unit. It is EPA's understanding that Pogo will take into account the guidance given by EPA, and possibly information gathered during the testing you will conduct later this month, and resubmit a new petition based on the new information gathered. It is also possible that Pogo will discover through the testing conducted that you will need to move forward with the installation of controls, which could have the potential to eliminate the need for approval of a petition.

We made plans when we spoke to have an additional call to discuss any details regarding the source test plan that we discover as we continue to review that document. We can complete enough of a brief review, to give you what feedback we can, prior to your test. We are tentatively planning to try and be ready to discuss the test plan with you this Friday the 21st. If that day will not work, it will have to be after the 25th. We understand that your test will be late that week, so if this is going to be at all useful for you, we know we will need to discuss with you what we can by then.

Will 1pm Pacific time, on 6/21 work for you guys to have another call?

Regarding the petition dated May 14, 2013:

1. *Parameters must be continuously monitored.* Although the petition proposes a set of specific parameters as alternative monitoring under §60.2115, the petition fails to state that these parameters will be continuously monitored as required by the NSPS. The petition describes procedures that require the incinerator operators to inspect and verify that specific "set points" within the incinerator controls are set to comply with the specified range or value for each parameter (detailed below). This approach is not in accordance with the NSPS, which specifically states in §60.2115 that the specific operating limits must be "established during the initial performance test and continuously monitored thereafter". For each proposed parameter, you are required to submit a monitoring proposal detailing the monitoring equipment, the location of the equipment within the incinerator or exhaust system, the proposed averaging time over which compliance with the requirement will be determined (if appropriate), and the data collection and management system proposed to collect, process, and store the monitoring data. We also have the following comments regarding the specific monitoring parameters proposed in the petition:
 - a. *Charge weight.* On page 5, the petition states that each batch of waste will be weighed using a scale with $\pm 10\%$ accuracy with respect to the waste load capacity. In several places,

the petition proposes a per charge limit of 150 pounds (lbs) of waste. The proposed maximum charge weight of 150 lbs conflicts with other information contained in the petition documents. Specifically, waste charges of 150 lbs every 15 minutes (the proposed load interval) results in a burning capacity of 600 lb/hr. However, page 1 of the petition lists the burn rate of this incinerator as 480 lb/hr. Using the calculation approach given in section 7.5.3 on page 21 of the manufacturer's operating instructions, a burn rate of 480 lb/hr and a load interval of 15 minutes results in a maximum per charge weight limit of 120 lbs. This discrepancy should be addressed.

- b. *Load interval.* On page 3, the petition proposes a maximum load interval of 15 minutes, and states that the load interval "set point" in the incinerator control system will be observed to comply with this requirement as part of each incinerator startup sequence. While the load interval is one of several key parameters impacting incinerator performance, simply verifying the equipment set point does not comply with the NSPS requirement of continuous monitoring. A potential solution would be to record the time that each load of waste is charged to the incinerator and that this data then be used to calculate each actual load interval in determining compliance with the required value.
- c. *Primary combustion chamber temperature.* On page 4, the petition proposes a minimum primary combustion chamber temperature of 1,200° F, and states that the primary combustion chamber temperature "set point" in the incinerator control system will be observed to comply with this requirement as part of each incinerator startup sequence. While the primary combustion chamber temperature is one of several key parameters impacting incinerator performance, simply verifying the equipment set point does not comply with the NSPS requirement of continuous monitoring. A potential solution would be to continuously monitor and record the primary combustion chamber temperature at all times the incinerator is in operation. All data should be time-stamped for comparison with waste charging data to ensure that the temperature in the primary combustion chamber is in compliance with the requirement whenever waste is being combusted. Also, there appears to be conflicting information regarding the primary combustion chamber temperature given within the manufacturer's information. On page 72 of 75 within the petition pdf submittal the setting for the primary burner on/off control is set at 1,400° F. This apparent discrepancy should be addressed.
- d. *Primary combustion chamber burn time.* On page 4, the petition proposes a minimum burn cycle time of 5 hours for the primary combustion chamber, and states that the cycle time "set point" in the incinerator control system will be observed to comply with this requirement as part of each incinerator startup sequence. While the burn cycle time is one of several key parameters impacting incinerator performance, simply verifying the equipment set point does not comply with the NSPS requirement of continuous monitoring. A potential solution would be to record the burn cycle time following the last waste charge each time the incinerator is operated and that this data be used to calculate the actual burn cycle time in determining compliance with the required value.
- e. *Secondary combustion chamber temperature.* On page 4, the petition proposes a minimum secondary combustion chamber temperature of 1,832° F, and states that the secondary combustion chamber temperature "set point" in the incinerator control system will be observed to comply with this requirement as part of each incinerator startup sequence. While the secondary combustion chamber temperature is one of several key parameters impacting incinerator performance, simply verifying the equipment set point does not comply with the NSPS requirement of continuous monitoring. A potential solution would be to continuously monitor and record the secondary combustion chamber

temperature at all times the incinerator is in operation. All data should be time-stamped for comparison with waste charging data to ensure that the temperature in the secondary combustion chamber is in compliance with the requirement whenever waste is being or has been recently combusted. Also, there appears to be conflicting information regarding the secondary combustion chamber temperature given within the manufacturer's information. On page 72 of 75 within the petition pdf submittal the setting for the secondary burner hi/lo control is set at 1,800° F. This apparent discrepancy should be addressed.

- f. *Secondary combustion chamber burn time.* On page 4, the petition proposes a minimum burn cycle time of 1 hour after the end of the 5-hour primary chamber burn cycle for the secondary combustion chamber, and states that the cycle time "set point" in the incinerator control system will be observed to comply with this requirement as part of each incinerator startup sequence. While the burn cycle time is one of several key parameters impacting incinerator performance, simply verifying the equipment set point complies with the NSPS requirement of continuous monitoring. A potential solution would be to record the secondary chamber burn cycle time each time the incinerator is operated and that this data be used to calculate the actual burn cycle time in relation to the primary chamber 5-hour burn cycle in determining compliance with the required value.
2. *Residence time.* The exhaust gas residence time, particularly in the secondary combustion chamber, is a key parameter tied to the air pollutant emissions from incinerators, yet the petition does not propose methods and equipment to monitor this parameter either directly or indirectly. A potential solution could be to install a continuous flow rate monitor on the exhaust stack of the incinerator. However, due to the extremely high temperatures, this instrumentation may not be available, or may be very expensive. Should Region 10 determine based on information presented that the flow rate monitor is unavailable, cost prohibitive, or impractical for some reason, two alternative approaches could help to address this issue, although less directly. The first would be to ensure that during the emission testing, the source tester collects flow rate data at a reasonable frequency throughout each test run and burn cycle, and then examine this data to gain an understanding of its variability through the incinerator burn/operating cycle. If we observe that the flow rate variability is reasonably small (for example, less than a factor of 2 or 3), this would reduce the concern regarding verification of residence time. We could then rely on stringent waste characterization and combustion chamber temperature monitoring.

The second approach would be to require continuous monitoring of an appropriate fan parameter (such as amperage or horsepower) which is related to fan flow rate as shown by the appropriate fan curves. Based on the variability of the fan amperage during the emission testing, an acceptable operating range for each fan could be developed to ensure that the combustion air supply and the resulting gas flow rate during subsequent incinerator operations do not exceed that which occurred during the testing to an unacceptable degree.

3. *Parametric values during testing.* As discussed above, in order to comply with the NSPS petition requirements in §60.2115, the various operating parameters must be continuously monitored during and subsequent to emission testing. It should be noted that the actual measured values as occur during the emission testing must be at or near the ranges and/or minimum/maximum values proposed by the facility. For example, if the primary combustion chamber temperature is consistently around 1,400° F during testing, it would not make good technical sense to allow the ongoing operating limit to remain at the proposed value of 1,200° F.
4. *Waste composition.* On page 1, the petition states that "type 2 waste" will be combusted in the incinerator. This description does not provide sufficient detail regarding the waste stream. The

specific sources of the waste and proportions from each source must be documented to ensure that the waste combusted during the emission testing is representative of the future waste stream sent to the incinerator for disposal. Subsequent to the emission testing, ongoing characterization of the waste stream is necessary to ensure that the waste mix continues to be similar to that combusted during the emission testing. Based on the incinerator operation, waste monitoring should be on a batch load basis to ensure that the waste mixture is consistent and similar to that burned during testing. A waste characterization plan should be developed to address these issues. Additionally, the facility should be required to document any waste segregation practices in place at the facility. For example, this would include any plan in place to divert elements of the hazardous waste stream such as batteries to ensure they are not combusted in the incinerator.

5. *Incinerator fuel.* The petition and manufacturer's operating instructions are not consistent with regard to the fuel used by the incinerator. The petition states the unit is fired on propane and makes no mention of waste oil. The manufacturer's instructions describe combustion of waste oil but make no mention of propane. Whatever fuel is fired during the performance test will establish the allowable fuel to be used in future operations. Pogo must clarify the incinerator's primary fuel, and whether waste oil is to be burned in the incinerator.
6. *Monitoring plan requirements.* In addition to the recommendations above, the facility must ensure that all monitoring plans meet the specific requirements contained within 40 CFR 60.2115.

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R10 RICE Website, Engine Compliance Assistance  
[http://yosemite.epa.gov/R10/airpage.nsf/Enforcement/rice\\_rules](http://yosemite.epa.gov/R10/airpage.nsf/Enforcement/rice_rules)

Boiler Area Source Compliance Assistance  
<http://www.epa.gov/boilercompliance/>

Department of Energy Website on Energy Assessments  
[http://www1.eere.energy.gov/manufacturing/tech\\_deployment/energy\\_assessment.html](http://www1.eere.energy.gov/manufacturing/tech_deployment/energy_assessment.html)

Non-Hazardous Secondary Materials  
<http://www.epa.gov/epawaste/nonhaz/define/index.htm>

Combustion Regulatory Actions  
<http://www.epa.gov/airquality/combustion/actions.html>

Boiler TTN Page  
<http://www.epa.gov/ttn/atw/boiler/boilerpg.html>

RICE TTN Page  
<http://www.epa.gov/ttn/atw/rice/ricepg.html>

Combustion Portal (compliance assistance for combustion regulations)  
<http://www.combustionportal.org/>

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